and the volume of herbicide solution applied to the cutting blade was increased compared to the 2005 treatments. Re-growth heights were measured one year after treatment.

In March 2008, the experiment was repeated using tulip poplar and sweet gum trees that had re-grown following clipping in 2005 and 2006. In 2008, there were not enough surviving stems of red maple to include that species. Treatments were applied in a randomized complete block design with three replications. Re-growth heights were measured six months after treatment.

Diamond Wet Blade herbicide application comparisons -- Field Experiments

Using data collected from the hand-lopper experiment and other reports, field experiments were designed and established to test the efficacy of herbicides applied with the Diamond Wet-Blade (DWB) mower for the control of woody vegetation. Four experiments were established, three roadsides and one distribution line. The DWB was calibrated to apply 2.5 gallons of solution per acre. Herbicide treatments differed between experiments in response to preliminary data from these experiments as well as reports from ROW managers field testing wet blade equipment.

In August 2007, a field experiment was established along a roadside in Chatham County, NC. Treatments were: mow only, Garlon 3A (triclopyr) 3.75 lb ae/A + Arsenal (imazapyr) 0.25 lb ae/A, Arsenal 0.5 lb ae/A, Arsenal 0.25 lb ae/A, Garlon 3A 3.75 lb ae/A + Weedar 64 (2,4-D) 3.8 lb ae/A, and Weedar 64 3.8 lb ae/A + Arsenal 0.25 lb ae/A. Plots were arranged in a randomized complete block design with four replications with each plot measuring 8 feet by 125 feet. The majority of the trees present were 4 to 10 feet tall with 0.5 to 3 inch diameter stems. Percent of stems that re-grew was recorded three and nine months after treatment, visual rating of percent suppression of re-growth was recorded nine months after treatment, and re-growth heights were recorded one year after treatment. The ten tallest sweet gums, five tallest tulip poplars and oaks (*Quercus* sp.), and three tallest red maples and red buds (*Cercis canadensis)* in each plot were measured. The plots were retreated in September 2008, with exception of the Weedar 64 3.8 lb ae/A + Arsenal 0.25 lb ae/A due to poor results and label recommendation about mixing these two products. The majority of the trees were 2 to 7 feet tall with less than one inch stem diameters. Percent of stems that re-grew was recorded 8 months after treatment and re-growth heights were measured 10 months after treatment. The ten tallest sweet gums, five tallest tulip poplars, and three tallest red maples in each plot were measured.

In early April 2008, a field experiment was established under a power distribution line right-of-way in Efland, NC. Treatments were selected based on preliminary results from the first Chatham County roadside experiment. Treatments were: mow only, Garlon 3A 3.75 lb ae/A, 3.75 lb ae/A Garlon 3A ae/A+ 0.25 lb ae/A Arsenal ae/A, and Garlon 3A 3.75 lb ae/A + Weedar 64 3.8 lb ae/A. Plots were arranged in a randomized complete block design with three replications with each plot measuring 12 feet by 80 feet. The majority of the trees were 1 to 6 feet tall with 0.25 to 1.5 inch diameter stems. The percent of stems that re-sprouted was recorded five months after treatment and the height of the re-growth of the ten tallest sweet gums and three tallest sycamores (*Platanus occidentalis*) in each plot were measured 12 months after treatment.

In early April 2008, a field experiment was established to compare doses of Garlon 3A plus Weedar 64 along a second roadside in Chatham County, NC. Treatments were selected based on preliminary results from the Garlon 3A and Weedar 64 treatment from the first Chatham County roadside experiment. Treatments were: mow only and factorial combinations